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Oral

The impulsive solar energetic particle (SEP) events show a peculiar elemental composition, with an increased abundance of ^3He and heavy-ion, markedly different from the composition of our Solar System. The unusual composition of impulsive SEP events has been attributed to a unique acceleration mechanism that independently enhances the abundances of ^3He and heavier ions. The energy spectral forms vary from power laws to rounded spectra at low energies. The solar sources of the events have been associated with coronal jets, which sometimes show an extension to high altitudes as narrow CMEs. The jets are triggered by an emergence of magnetic flux or an eruption of cold mini filament. In addition, jets in such events are often accompanied by small-scale coronal waves. Observations of jets in impulsive SEP sources indicate an acceleration of ions by magnetic reconnection involving field lines open to interplanetary space. It has been speculated that shocks may form in solar sources via fast, narrow CMEs or coronal waves, affecting particles from the jets. This presentation outlines the current understanding of the relationship between jets/narrow CMEs and energetic ions in impulsive SEP events.

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